

Rethinking deliveries summary report



Introduction

The Capital's population is set to grow from 8.6 million today to around 10 million by 2031 – the equivalent of absorbing the populations of Birmingham and Leeds. This will mean another five million trips each day on top of the 26 million already taking place on our roads. If we do not address this, congestion in central London is expected to rise by around 60 per cent by 2031, making current pollution problems worse and causing greater difficulties for organisations delivering goods and services.

London's economic success relies on the safe and efficient delivery of goods and services. With positive engagement and collaboration, we can all contribute to when and how freight operates, for the wider benefit of the Capital's residents, businesses and visitors.

By consolidating delivery and servicing trips we can help manage increasing levels of congestion whilst delivering significant safety, efficiency and environmental benefits.

We have studied the range of techniques currently in place in the UK and internationally to help understand how each can be used, their benefits and potential barriers.

This document focuses on the main findings and identifies areas where different consolidation solutions can be introduced in a cost-effective way.

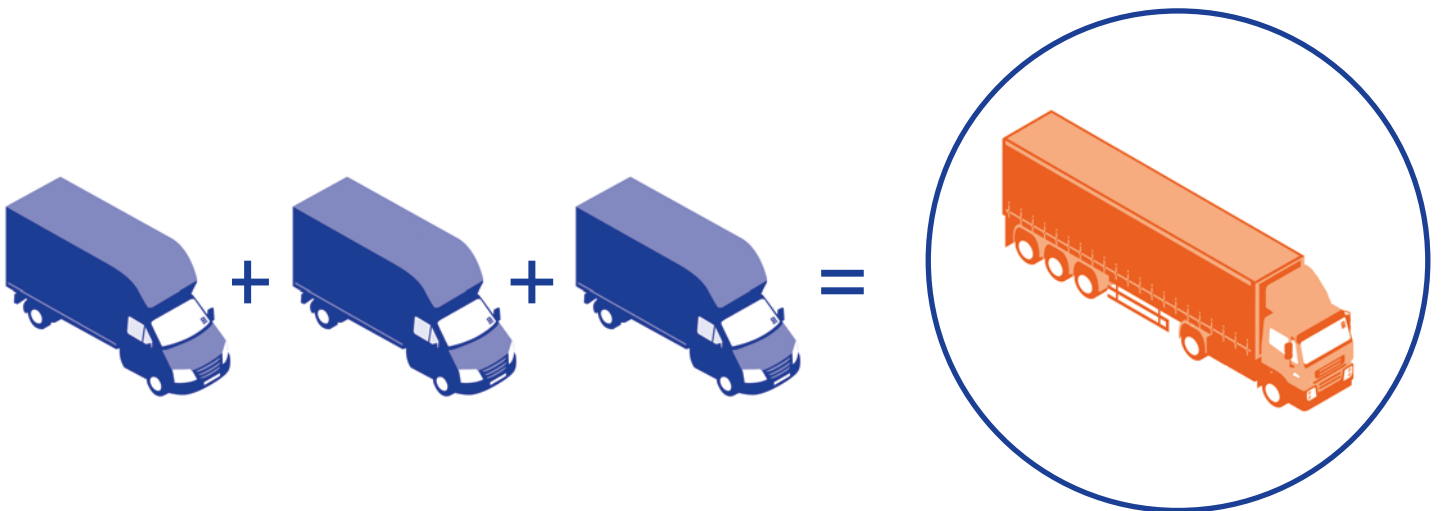
This report is complemented by 14 case studies (available on tfl.gov.uk) which show how the different solutions have been used.



What is consolidation?

Consolidation's goal is simple – reduce the number of vehicles carrying freight entering a city by making sure their carrying capacity is fully used.

The concept has been developed and enhanced over the years into an increasing number of different forms. These different forms can be defined as consisting of either 'practical' or 'changing behaviour' solutions (see Table 1).



BEHAVIOURAL SOLUTIONS	PRACTICAL SOLUTIONS
Procurement-led solutions	Urban consolidation centres
Upstream supply chain	Micro-consolidation centres
Click & collect at store	Locker boxes/locker banks
	Pick up drop off parcel shop

Table 1: Consolidation solutions

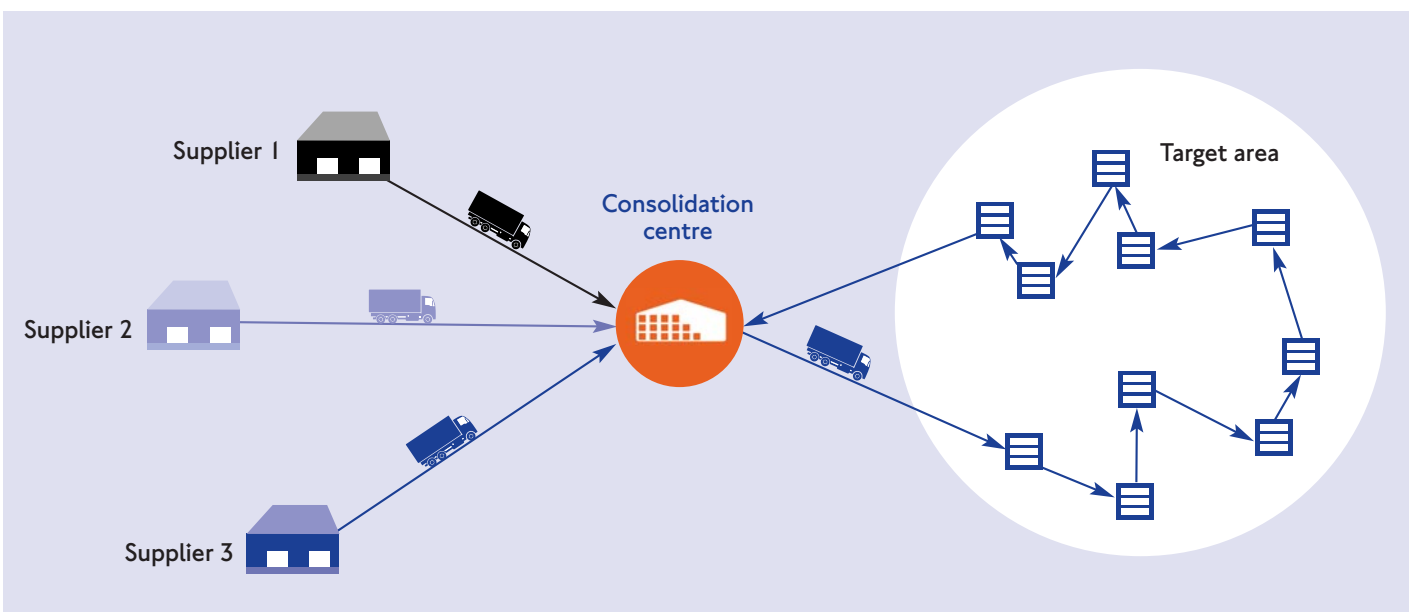
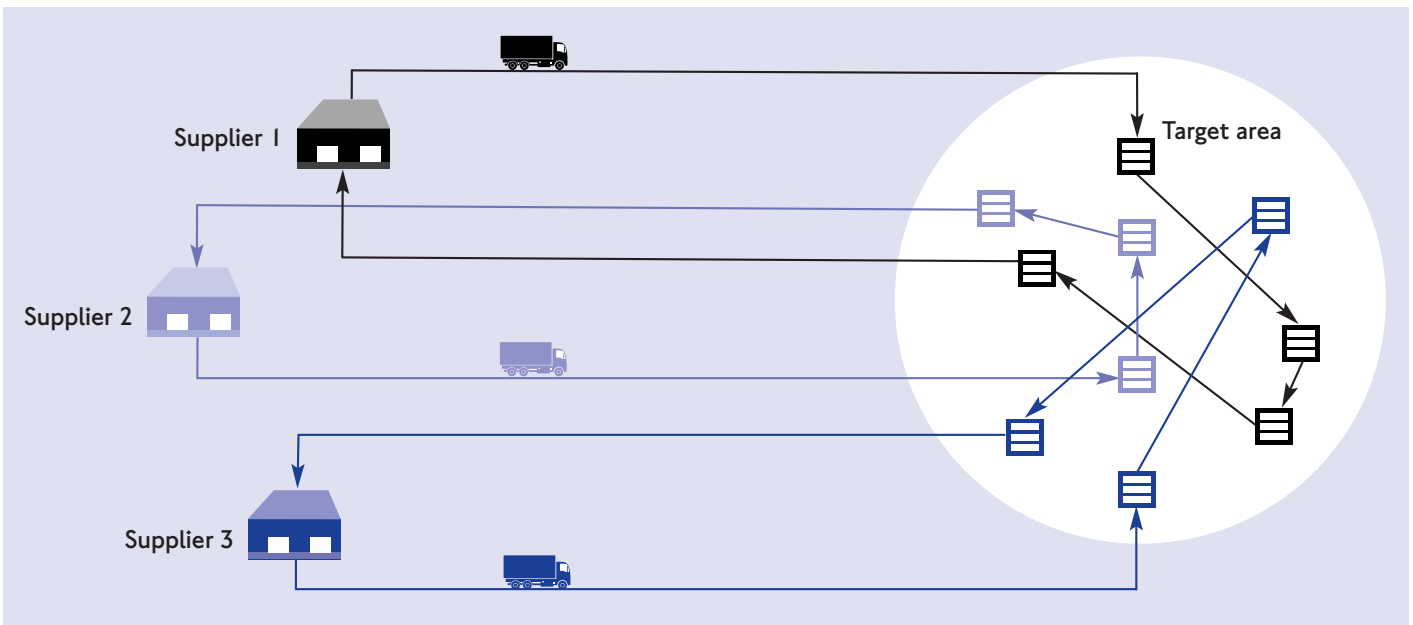
Common consolidation solutions

Regional distribution centres

A Regional Distribution Centre (RDC) is where a single retailer, such as a supermarket chain, uses a dedicated facility to receive stocks of different branded products from a number of suppliers. These goods are sorted and combined for delivery out to their stores.

Urban consolidation centres

At Urban Consolidation Centres (UCC), vehicles from multiple suppliers drop off their goods. They are sorted into mixed goods for delivery to multiple end users. While a UCC is not strictly a warehouse, it can provide short-term storage until goods are required by the customer. This allows users to take advantage of bulk buying discounts when space is limited on their own premises.



The sharing of transport resources through collaboration between businesses can lead to a reduction in vehicle trips as well as financial and environmental savings.

Micro-consolidation centres

The consolidation of goods at a facility much closer to the delivery point is referred to as micro consolidation. These usually serve smaller areas, handling small and lightweight goods often delivered by couriers. Zero emissions last mile solutions such as cargos bikes and small electric vans can be used to provide additional environmental benefits.

Collective procurement

This refers to a group of businesses who jointly purchase goods and services from a number of carefully selected suppliers. For example, the order of stationery for one organisation is combined with those of other businesses so deliveries arrive together, on a single vehicle. This may be appropriate when the businesses share a building or are in the same area. A major benefit of collective procurement is that it increases buying power and usually results in lower prices.

Nominated carriers

This is where a delivery company is selected by the purchaser to deliver all their goods from suppliers. This solution is suitable for all types of organisations. Its effectiveness is increased if businesses located in a specific area work together and agree to use the same nominated carrier for all their deliveries and collections. It eliminates the issue of a large number of carriers duplicating each other's paths with partially-filled trucks or vans.

Bunching orders

A simple solution that does not involve a major change in the way goods are bought, is to agree with suppliers that regardless of the number of orders placed during a given time period, the supplier only makes the delivery on a given day or date. Individual orders are 'bunched' so they arrive together, on a single vehicle. This reduces the overall number of trips needed and associated emissions. It results in less delivery costs for the operator and where the minimum order value is increased, leads to less order processing costs for the customer.

Upstream supply chain

The sharing of transport resources through collaboration between businesses can lead to a reduction in trips as well as financial and environmental savings. Another example of supply chain collaboration is a pallet network. Several shippers and receivers trading under a common name send full pallets to a hub for sorting and onward distribution.

Why consolidate?

Congestion

Commercial vehicles represent 16 per cent of all traffic in London and during the morning peak, make up 28 per cent of vehicles in Central London. Consolidation and re-timing measures have been identified by the Roads Task Force¹ as key tools to reduce the impacts of congestion.

Environment

Environmental factors are a major driver of change in the transport sector. The Climate Change Act 2008 established a long-term framework to reduce the UK's greenhouse gas emissions by at least 80 per cent, compared to 1990 levels, by 2050. The Government's response to meet these targets was the Carbon Plan² which contains numerous measures for implementation in private and public transport including investment for low emission vehicles, green buses and fuel efficiency.

Public Health experts estimate 29,000 deaths in the UK occur each year due to exposure to poor air quality. The main source of air pollution in London is road traffic, primarily diesel vehicles that emit up to four times more nitrogen oxides (NOx) and 22 times more particulate matter (PM) than a petrol equivalent. The aim of consolidation is to reduce the number of commercial vehicles entering the city. Any environmental benefits achieved by consolidation techniques will have positive effects on air quality.



Safety

New infrastructure that protects vulnerable road users and has enabled us to meet the Mayor's target to reduce the number of people killed or seriously injured (KSI) on London's roads by 40 per cent six years early. KSIs are now at their lowest level in London since records began. To build on this, the Mayor has now set a new target for a 50 per cent fall in KSIs by 2020. Meeting this would mean a reduction of around 10,000 deaths³. A sustained increase in consolidation activity will help to reduce the number of commercial vehicles on London's roads, helping to reduce the risk to vulnerable road users.

Operational efficiency

Consolidating products from their point of origin or at a consolidation centre can realise cost savings by increasing order sizes (buying in bulk) and utilising the full capacity of delivery vehicles. This process also helps to minimise commercial vehicle activity and the associated congestion and emissions.

Planning conditions

The planning process can be used to stipulate the requirement to use consolidation solutions in both the construction and occupation stages. The use of a construction consolidation centre (CCC) in the construction phase has been proven to achieve cost benefits including quicker build time, less waste, improved security, reduced losses and damages. When a building is occupied, the use of a UCC can be mandated which, together with restrictions to delivery times, will minimise the negative impact of deliveries on the movement of traffic, cyclists and pedestrians in the immediate area.

Security

At sites susceptible to terrorist attack, the use of a consolidation centre enables security checks to be completed on all inbound goods. Items can be scanned on receipt of delivery before being transferred to their final destination.

¹ The Roads Task Force (RTF) was set up by the Mayor of London in 2012 to tackle the challenges facing London's streets and roads

² The Carbon Plan: Delivering our Low Carbon Future 2011

³ Safe London Streets – our approach

Priority groups

We have identified priority stakeholder groups, each with a different set of suitable consolidation solutions. There is no ‘one size fits all’ solution for each group. Solutions that may work for one organisation within an individual group may not be suitable for others. A summary of the recommended solutions by priority group is shown in Table 2, together with an objective view of the suitability of each solution for widespread use (scalability) graded as High (H), Medium (M) and Low (L).



SCALABILITY	CONSOLIDATION SOLUTION						
Priority group	Nominated carrier	Other procurement	Upstream supply chain	Micro-consolidation	Consolidation Centre	Click & Collect	Locker banks
Construction/major projects			M		H		
Business Improvement Districts and area-based businesses	H	H		H	H		L
Retailers	L		L			H	H
Consumers/residents						M	M
TfL, boroughs, Greater London Authority and other public sector organisations	H	H	M	H	H		L
Landowner/developer/managing agent	M	M		M	M		M
Hospitality sector	L	L	L		M		

Table 2: Potential for adoption of consolidation solutions

SCALABILITY	CONSOLIDATION SOLUTION						
Priority group	Nominated carrier	Other procurement	Upstream supply chain	Micro-consolidation	Consolidation Centre	Click & Collect	Locker banks
TfL	H	H			H	L	M

Table 3: Scalability of internal TfL consolidation solutions

Summary

- Consolidation solutions can deliver air quality, congestion benefits and safer streets, particularly for cyclists and pedestrians. It is clear the term 'consolidation' relating to delivery and servicing activity is frequently perceived as costly by businesses and operators
- We have reviewed different types of consolidation solutions and found there are significant knowledge gaps regarding their effectiveness, costs and benefits and ability to affect behaviour change
- We have highlighted a range of solutions that can be employed. They deliver similar environmental and social benefits as consolidation centres and offer additional financial benefits
- Using procurement-led solutions such as nominated carriers, collective procurement and bunching orders is likely to be the most cost effective method to consolidate. This requires the least amount of investment and has the highest probability of generating a financial return

How can you make a difference?

Contact:

✉ freight@tfl.gov.uk

🌐 tfl.gov.uk/freight

View our consolidation film

